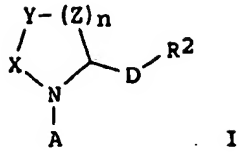


I

AB The invention is directed to carboxylic acids and isosteres of heterocyclic ring compds. I [X, Y, Z = C, O, S, N (provided that not all X, Y, Z are C); n = 1-3; A = R1C(O)C(O), R1C(O)C(S), R1SO2, (E)(R1)NC(O); R1, E = H, C1-9 (un)branched alkyl or alkenyl, aryl, etc.; D = C1-10 (un)branched alkyl, ethylene, butylene; R2 = carboxylic acid or carboxylic acid isostere] which have multiple heteroatoms within the heterocyclic ring, derivs. containing N-linked diketos, sulfonamides, ureas and carbamates attached thereto, their preparation and use for treating neurol. disorders including phys. damaged nerves and neurodegenerative diseases, as well as for treating alopecia and promoting hair growth.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:784076 CAPLUS
DOCUMENT NUMBER: 132:22867
TITLE: Preparation of urea and carbamate derivatives of N-heterocyclic carboxylic acids and carboxylic acid isosteres for the treatment of neurodegenerative diseases and alopecia
INVENTOR(S): Hamilton, Gregory S.; Norman, Mark H.; Wu, Yong-Qian; Steiner, Joseph P.
PATENT ASSIGNEE(S): Guilford Pharmaceuticals Inc., USA; Amgen, Inc.
SOURCE: PCT Int. Appl., 102 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9962879	A1	19991209	WO 1998-US25570	19981203
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
ZA 9811061	A	19991203	ZA 1998-11061	19981203
CA 2333960	AA	19991209	CA 1998-2333960	19981203
AU 9916204	A1	19991220	AU 1999-16204	19981203
EP 1082301	A1	20010314	EP 1998-960656	19981203
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 9815881	A	20020723	BR 1998-15881	19981203
NO 2000006111	A	20010201	NO 2000-6111	20001201

BG 105014	A	20010831	BG 2000-105014		20001201
US 2002007075	A1	20020117	US 2001-771686		20010130
US 2002042442	A1	20020411	US 2001-847432		20010503
PRIORITY APPLN. INFO.:			US 1998-87844P	P	19980603
			US 1998-204235	A3	19981203
			WO 1998-US25570	W	19981203

OTHER SOURCE(S): MARPAT 132:22867

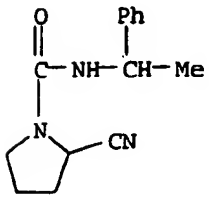
IT **251574-10-4P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

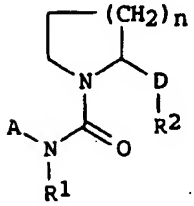
(preparation of urea and carbamate derivs. of N-heterocyclic carboxylic acids and carboxylic acid isosteres for the treatment of neurodegenerative diseases and alopecia)

RN 251574-10-4 CAPLUS

CN 1-Pyrrolidinecarboxamide, 2-cyano-N-(1-phenylethyl)- (9CI) (CA INDEX NAME)



GI



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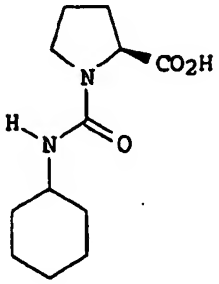

II

AB The title urea or carbamate derivs. I [n = 1-3; R1 and A = H, alkyl alkenyl, aryl, heteroaryl, cycloalkyl, heterocycloalkyl; D = bond, alkyl, alkenyl, alkynyl; R2 = CO2H, alkyl, alkenyl, alkynyl, aryl, heteroaryl, cycloalkyl, carboxylic acid isosteres, e.g. SO3H, cyano, sulfamoyl, carbamoyl, etc., (un)substituted by R3; R3 = H, HO, halo, haloalkyl, thiocarbonyl, alkoxy, alkenyloxy, aryloxy, cyano, nitro, imino, alkylthio, etc., and CO2R4; R4 = H, alkyl, alkenyl] and their pharmaceutically acceptable salts, esters, etc. were prepared and their pharmaceutical formulations described for use for treating neurol. disorders including phys. damaged nerves and neurodegenerative diseases and for treating alopecia and promoting hair growth. Thus, reaction of proline Me ester hydrochloride with cyclohexyl isocyanate and hydrolysis of the resulting ester gave the (cyclohexylcarbamoyl)pyrrolidinecarboxylic acid II.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT